

**BY ORDER OF THE COMMANDER  
2D BOMB WING**



**AIR FORCE GLOBAL STRIKE  
COMMAND INSTRUCTION 21-105**

**20 OCTOBER 2015**

**BARKSDALE AFB SUPPLEMENT  
Supplement**

**6 SEPTEMBER 2017**

**Maintenance**

**CORROSION PREVENTION AND  
CONTROL PROGRAM**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction establishes policy and assigns responsibility to establish and support the Corrosion Prevention and Control Program for Air Force Global Strike Command (AFGSC) IAW AFI 21-101, *Aircraft and Equipment Maintenance Management*, and AFI 21-202V1, *Missile Maintenance Management*. This instruction does not apply to Air Force Reserve Command (AFRC) or to the Air National Guard (ANG); however procedures in this instruction will be followed by AFRC/ANG Classic Associate units associated with AFGSC. The authority to waive the requirements in this publication is T-2. See AFI 33-360, *Publications and Forms Management*, Table 1.1 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority. Units will publish a supplement to this instruction that addresses unit-specific policies not included in this instruction, and unit-specific markings applied to aircraft. Units will route to the Office of Primary Responsibility (OPR) of this publication for approval prior to publication. Ensure that all records created as a result of processes prescribed in this publication

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**(Barksdale)** This supplement establishes guidance for aircraft/equipment corrosion prevention and application of local unit markings IAW AFI 21-101, *Aircraft and Equipment Maintenance Management*, and AFI 21-202V1, *Missile Maintenance Management*. This instruction does not apply to Air Force Reserve Command (AFRC) or to the Air National Guard (ANG). Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>. Contact supporting records managers as required. Send comments, questions, and suggested improvements to this publication on AF Form 847, *Recommendation for Change of Publication*, through channels to HQ AFGSC/A4BX, 841 Fairchild Ave, Suite 201, Barksdale AFB LA 71110. This publication may not be further implemented/extended. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, Table 1.1 for a description of the authorities associated with the Tier numbers. Submit request for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items.

### ***SUMMARY OF CHANGES***

This publication has been substantially revised and must be completely reviewed in its entirety.

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## Chapter 1

### AIRCRAFT CORROSION CONTROL ROLES AND RESPONSIBILITIES

**1.1. HQ AFGSC/A4A Responsibilities.** AFGSC/A4A is responsible for overall aircraft corrosion program management within the command. AFGSC/A4A will designate the AFGSC Fabrication Functional Manager as the Aircraft Corrosion Prevention and Control Program Manager. The program manager will:

- 1.1.1. Manage the Corrosion Prevention and Control Program for all assigned aircraft.
- 1.1.2. Serve as the command's focal point for aircraft corrosion prevention and control issues and coordinate all actions with staff directorates as appropriate.
- 1.1.3. Coordinate all nose art request packages thru AFGSC/A1 and JA prior to submission to AFGSC/CC for final approval. Once approved, package will be forwarded to AFGSC/HO and applicable unit historian for archive.
- 1.1.4. Serve as co-chair on the AFGSC Aircraft Corrosion Prevention Advisory Board (CPAB).
- 1.1.5. Attend the Tri-Service Corrosion Conference, the AF Corrosion Conference and the Environmental Symposium.
- 1.1.6. Review and approve Maintenance Group (MXG) corrosion prevention and control training programs.
  - 1.1.6.1. Maintain file copies of approved unit corrosion prevention and control training programs. Unit programs will be reviewed for applicability to like units and forwarded as appropriate.
- 1.1.7. Serve as the Command's interface with Air Education and Training Command (AETC) and the Air Force Institute of Technology (AFIT) for corrosion training course content changes.
- 1.1.8. Coordinate Major Command (MAJCOM) approval for test programs through appropriate Weapon System Team.

**1.2. Bomb Wing Commander Responsibilities.** Bomb Wing Commanders will:

- 1.2.1. Review and approve all aircraft paint waiver requests prior to submission to HQ AFGSC/A4A.
- 1.2.2. Review and approve all nose art related changes or requests prior to submission to HQ AFGSC/A4A.

**1.3. Maintenance Group Commander Responsibilities.** The MXG/CC is responsible for establishing and maintaining an effective Corrosion Prevention and Control Program. The MXG/CC will:

- 1.3.1. Ensure adequate corrosion control facilities are available to wash aircraft, perform minor maintenance, and paint assigned aircraft on a year round basis. An outside wash rack may be used on an interim basis when weather conditions permit and when approved by Base Civil Engineer.

1.3.2. Ensure requirements outlined in AFMAN 32-1084, *Facility Requirements*, are met for support equipment (SE) and aircraft small parts. **Note:** This capability can be incorporated in the aircraft corrosion control facility if space permits.

1.3.3. Ensure paint facility control technology meets local, state and federal Environmental Protection Agency requirements in conjunction with current National Emission Standards for Hazardous Air Pollutants.

1.3.4. Ensure Plans, Scheduling and Documentation sections report any assigned aircraft wash overdue more than 30 days with an official memo to HQ AFGSC/A4A not later than 15 days after the 30-day overdue date. When aircraft are located in severe corrosion environments, the overdue wash reporting requirement is seven days. Within this memo, include reason for overdue and corrective action taken to prevent further occurrences.

1.3.5. Appoint, in writing, a Wash Rack Facility Manager and a Unit Corrosion Prevention and Control Program Manager (may be same individual as determined by MXG/CC).

**1.4. Unit Corrosion Prevention and Control Program Manager Responsibilities.** The Unit Corrosion Prevention and Control Program Manager will ensure all facets of corrosion prevention are being conducted for aircraft operations. Additionally, the program manager will:

1.4.1. Serve as the point of contact for corrosion prevention and control between the MXG and AFGSC/A4A.

1.4.2. Ensure creation of a supplement to this instruction, to include, but not limited to the following:

1.4.2.1. Numbered Air Force (NAF), Wing, Operations Group (OG), Operational Test and Bomb Squadron commander aircraft designation and marking requirements of identified aircraft.

1.4.2.1.1. **(Added-Barksdale)** The following Aircraft are designated as Commander's Aircraft:

1.4.2.1.1.1. **(Added-Barksdale)** Aircraft 60-008 is designated as the 8 AF/CC Aircraft. Unit designator and tail number markings will be painted flat black (Mil-PRF-85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white paint (Mil -PRF-85285) or with Matte White Vinyl (P/N P83242A). The serial numbers will not be shadowed.

1.4.2.1.1.2. **(Added-Barksdale)** Aircraft 60-002 is designated as the 2 BW/CC Aircraft. Unit designator and tail number markings will be painted flat black (Mil-PRF- 85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white paint (Mil -PRF-85285) or with Matte White Vinyl (P/N P83242A). The serial numbers will not be shadowed.

1.4.2.1.1.3. **(Added-Barksdale)** Aircraft 61-028 is designated as the 49th OT Aircraft. Unit designator, the letters "TES" (24"H), and tail number markings will be painted flat black (Mil-PRF-85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white paint (Mil -PRF-85285) or with Matte White Vinyl (P/N P83242A). The

serial numbers will be shadowed in the same fashion.

1.4.2.1.1.4. **(Added-Barksdale)** Aircraft 61-002 is designated as the 2 OG/CC Aircraft. Unit designator and tail number markings will be painted flat black (Mil-PRF-85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white paint (Mil –PRF-85285) or with Matte White Vinyl (P/N P83242A). The serial numbers will not be shadowed.

1.4.2.1.1.5. **(Added-Barksdale)** Aircraft 61-010 is designated as the 343 BS/CC Aircraft. Unit designator and tail number markings will be painted flat black (Mil-PRF- 85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white paint (Mil –PRF-85285) or with Matte White Vinyl (P/N P83242A). The serial numbers will not be shadowed.

1.4.2.1.1.6. **(Added-Barksdale)** Aircraft 61-020 is designated as the 20 BS/CC Aircraft. Unit designator and tail number markings will be painted flat black (Mil-PRF- 85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white (Mil –PRF-85285) or with Matte White Vinyl (P/N P83242A). The serial numbers will not be shadowed.

1.4.2.1.1.7. **(Added-Barksdale)** Aircraft 60-059 is designated as the 96 BS/CC Aircraft. Unit designator and tail number markings will be painted flat black (Mil-PRF- 85285) or stenciled with Matte Black Vinyl (P/N P58744A) and shadowed towards the lower aft side of the markings with flat white (Mil –PRF-85285) or with Matte White Vinyl (P/N P83242A). The serial numbers will not be shadowed.

1.4.2.2. Local unit marking requirements (e.g. tail stripes, crew names, nose art, etc.).

1.4.2.2.1. **(Added-Barksdale)** The 8 AF/CC Aircraft 60-008 will conform to the following criteria: A 13-inch wide flat blue painted (Mil-PRF-85285) or Matte blue vinyl (P/N P57497A) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from the leading edge to the trailing edge of the vertical not to extend onto the rudder. The words “Mighty Eighth” (9”H 60 “L) are in “SOUV. DEMI BOLD ACCT AK REV B” font and will be made of Matte yellow vinyl (R=255, G=255, B=0) and centered within the blue stripe. The 8TH AF patches (9.75”H) will be centered within the blue stripe located forward and aft of the words “Mighty Eighth”. One patch will be centered horizontally and vertically between the leading edge of the blue stripe and the “M” and one patch will be centered horizontally and vertically between the trailing edge of the blue stripe and “H”.

1.4.2.2.2. **(Added-Barksdale)** The 2 BW/CC Aircraft 60-002 will conform to the following criteria: A 13-inch wide flat green painted (Mil-PRF-85285) or Matte green vinyl (R=0, G=126, B=72) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from the leading edge to the trailing edge of the vertical not to extend onto the rudder. The word “Deuce” (9”H X 30 “L) is in “SOUV. DEMI BOLD ACCT AK REV B” font and will be made of Matte white

vinyl (P/N P20868C) and centered within the green stripe. The “Fleur-de-lis” (9”H) will be made of Matte white vinyl (P/N P20868C) and will be centered horizontally and vertically within the green stripe and located 11” from the center of the leading edge to the center of the “Fleur-de-lis”.

1.4.2.2.3. **(Added-Barksdale)** The 49 OT tail stripes will conform to the following criteria: A 15-inch wide checkered painted orange (Mil –PRF-12473) and white (Mil – PRF-85285) painted stripe. Checkered blocks will start with alternating orange (top leading edge) and white (bottom leading edge) (7.5”H X 7.5” W) blocks. The top of the stripe will start at the bottom of the fiberglass cap and ran from the leading edge to the trailing edge of the vertical not to extend onto the rudder. The letters “TES” (24”H) will be made of Matte black vinyl (P/N P58744A) and will be located centered between the “OT” and the serial numbers.

1.4.2.2.4. **(Added-Barksdale)** The 20 BS tail stripes will conform to the following criteria: a 13-inch wide flat blue painted (Mil-PRF-85285) or Matte blue vinyl (P57497A) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from leading edge to the trailing edge of the vertical not to extend onto the rudder. The word “BARKSDALE” (9”H X 60”L) is in “Old English” font and will be made of Matte white vinyl (P/N P20868C) and centered within the blue stripe. The “Fleur-de-lis” (9”H) will be made of Matte white vinyl (P/N P20868C) and will be centered horizontally and vertically within the blue stripe and located 11” from the center of the leading edge to the center of the “Fleur-de-lis”.

1.4.2.2.5. **(Added-Barksdale)** The 96 BS tail stripes will conform to the following criteria: a 13-inch wide flat red painted (Mil-PRF-85285) or Matte red vinyl (P57496A) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from leading edge to trailing edge of the vertical not to extend onto the rudder. The word “BARKSDALE” (9”H X 60”L) is in “Old English” font and will be made of Matte white vinyl (P/N P20868C) and centered within the red stripe. The “Fleur-de-lis” (9”H) will be made of Matte white vinyl (P/N P20868C) and will be centered horizontally and vertically within the red stripe and located 11” from the center of the leading edge to the center of the “Fleur-de-lis”.

1.4.2.2.6. **(Added-Barksdale)** The 2 OG/CC Aircraft 61-002 will conform to the following criteria: A 13-inch wide flat green painted (Mil-PRF-85285) or Matte green vinyl (R=0, G=126, B=72) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from the leading edge to the trailing edge of the vertical not to extend onto the rudder. The word “BARKSDALE” (9”H X 60”L) is in “Old English” font and will be made of Matte white vinyl (P/N P20868C) and centered within the green stripe. The “Fleur-de-lis” (9”H) will be made of Matte white vinyl (P/N P20868C) and will be centered horizontally and vertically within the green stripe and located 11” from the center of the leading edge to the center of the “Fleur-de-lis”.

1.4.2.2.7. **(Added-Barksdale)** The 343 BS/CC Aircraft 61-010 will conform to the following criteria: A 13-inch wide flat black painted (Mil-PRF-85285) or Matte black vinyl (P/N P58744A) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from leading edge to trailing edge of the

vertical not to extend onto the rudder. The word “Avengers” (9”H X 60”L) is in “SOUV. DEMI BOLD ACCT AK REV B” font and will be made of Matte orange vinyl (R=255, G=90, B=17) and centered within the black stripe.

1.4.2.2.8. **(Added-Barksdale)** The 20 BS/CC Aircraft 61-020 will conform to the following criteria: A 13-inch wide flat blue painted (Mil-PRF-85285) or Matte blue vinyl (P/N P57497A) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from the leading edge to the trailing edge of the vertical not to extend onto the rudder. The word “Buccaneers” (9”H 60 “L) is in “SOUV. DEMI BOLD ACCT AK REV B” font and will be made of Matte white vinyl (P/N P20868C) and centered within the blue stripe. The “Fleur-de-lis” (9”H) will be made of Matte white vinyl (P/N P20868C) and will be centered horizontally and vertically within the blue stripe and located 11” from the center of the leading edge to the center of the “Fleur-de-lis”.

1.4.2.2.9. **(Added-Barksdale)** The 96 BS/CC Aircraft 60-059 will conform to the following criteria: A 13-inch wide flat red painted (Mil-PRF-85285) or Matte red vinyl (P57496A) stripe will be placed with the top of the stripe starting at the bottom of the fiberglass cap and ran from leading edge to trailing edge of the vertical not to extend onto the rudder. The words “Red Devils” (9”H X 60”L) are in “SOUV. DEMI BOLD ACCT AK REV B” font and will be made of Matte white vinyl (P/N P20868C) and centered within the red stripe. The “Fleur-de-lis” (9”H) will be made of Matte white vinyl (P/N P20868C) and will be centered horizontally and vertically within the red stripe and located 11” from the center of the leading edge to the center of the “Fleur-de-lis”.

1.4.2.3. Aircraft paint identification placard size, shape and information requirements.

1.4.2.3.1. **(Added-Barksdale)** Currently all aircraft are stripped and painted during depot maintenance at Tinker AFB, OK. The placards are applied during repaint of the Aircraft.

1.4.3. Ensure corrosion specialists are not diverted to programs or projects for beautification purposes. Utilization of corrosion specialists for anything other than weapon system maintenance requires MXG/CC approval.

1.4.4. Ensure required equipment is obtained for efficient and effective corrosion prevention and control program.

1.4.5. Train or designate a 7-level Aircraft Structural Maintenance (ASM) or Low Observable Aircraft Structural Maintenance (LOASM) technician to train Aircraft Maintenance Squadron (AMXS) wash crew supervisors in all aspects of aircraft wash and to develop and implement a wash crew supervisor training plan.

1.4.6. Ensure development and utilization of local aircraft wash checklists in accordance with (IAW) Technical Order (TO) 00-5-1, *AF Technical Order System*.

1.4.7. Ensure personnel are trained prior to taking receipt/custody of wash rack facilities and equipment.

1.4.7.1. Base-specific training is required for all newly assigned personnel. Training from a previous base will not be used.



1.4.7.2. Ensure training is documented in appropriate training records.

1.4.7.2.1. **(Added-Barksdale)** Local corrosion prevention training requirements are tracked in IMDS.

1.4.8. Enforce the use of approved coating materials and cleaning compounds as determined by TOs, Qualified Products Listings (QPL), and Qualified Products Database (QPD).

1.4.9. Ensure coating system scoring and maintenance is accomplished IAW paragraph **2.2.2.**

**1.5. Maintenance Supervision Responsibilities.** Maintenance Supervision consists of the Operations Officer and Maintenance Superintendent (MX SUPT), who are responsible for oversight of aircraft wash requirements and will:

1.5.1. Ensure wash crew supervisors are experienced/qualified 5-levels or above. The wash crew supervisor will be trained by the Unit Corrosion Prevention and Control Program Manager or a qualified 7-level aircraft structural maintenance technician. Training shall be documented in the wash crew supervisor's training record.

1.5.1.1. Ensure trained wash crew supervisors are present throughout the duration of aircraft washes.

1.5.2. Provide a task trained and qualified aircraft wash crew, and ensure availability of personal protective equipment within the work center. When possible, the crew should include a dedicated crew chief or assistant dedicated crew chief.

1.5.3. **(Added-Barksdale)** Ensure frequency-of-cleaning/wash cycles are established for assigned aircraft to maximize corrosion prevention. Monitor aircraft wash schedules to eliminate overdue washes. In no case will unit wash cycles exceed the maximum wash cycles listed in T.O. 1-1-691.

1.5.4. **(Added-Barksdale)** During cold weather or when cold weather is predicted, (40 degrees and below), place the aircraft in Corrosion Control Facility (CCF) hangar the night before a scheduled wash to allow the aircraft to warm up (at least 8 hours before wash). IAW T.O. 1-1-691, do not wash aircraft outside when the temperature is below 40 degrees.

1.5.5. **(Added-Barksdale)** Ensure aircraft are in the Corrosion Control Facility (CCF) no later than (NLT) 0700 on the first day of a scheduled paint. During inclement weather, aircraft will be in place by 0300 to allow the aircraft to acclimate to hangar temperature.

1.5.6. **(Added-Barksdale)** Ensure aircraft are safe for maintenance (e.g., no flares, batteries disconnected and aircraft electrical systems are de-energized) prior to being towed into the corrosion control facility.

**1.6. ASM/LOASM Section Chief Responsibilities.** The section chief will:

1.6.1. Ensure no other maintenance is accomplished on aircraft, equipment, or within environmentally controlled/cordoned off areas when hazardous/toxic materials are in use that requires the use of specialized personal protective equipment. In the event specialized respiratory protection equipment is required, personnel will be properly fitted for the equipment and trained in its use IAW AFOSH STD 48-137.

1.6.2. Forecast funding to attend and participate in applicable CPABs and other corrosion/structural related programs/meetings.

1.6.3. Submit CPAB agenda items to the Aircraft Corrosion Prevention and Control Program Manager in HQ AFGSC/A4A.

**1.7. Wash Rack Facility Manager Responsibilities.** The Wash Rack Facility Manager will ensure proper cleaning materials, equipment and supplies are maintained in accordance with AFI 21-101, *Aircraft and Equipment Maintenance Management*, and AFGSC supplements. Additionally, the Wash Rack Facility Manager will:

1.7.1. Ensure the required number and sizes of fire extinguishers are available and serviceable.

1.7.2. Ensure grounding points are inspected and approved IAW TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*.

1.7.3. Ensure fall protection lifeline cables are installed when required and properly maintained IAW manufacturer's instructions and AFI91-203, *Air Force Consolidated Occupational Safety Instruction*.

1.7.4. Ensure wash rack facility and surrounding area is kept clean and properly maintained.

1.7.5. Maintain all wash rack equipment in serviceable condition (e.g., water hoses, pumps, air hoses, powered wash equipment, support equipment, etc.).

**1.8. Wash Crew Supervisor Responsibilities.** The Wash Crew Supervisor will:

1.8.1. Provide safety briefings explaining hazards associated with wash rack operations.

1.8.2. Ensure aircraft wash crews are task trained and qualified.

1.8.3. Ensure proper safety equipment, personal protective equipment, cleaning materials and fall protection lifeline cables (installed when required) are properly maintained IAW manufacturer's instructions and AFI91-203.

1.8.4. Enter the requirement for wash, perform cleanliness inspection, sign the wash completion and enter the lubrication requirement in the AFTO Form 781A, *Maintenance Discrepancy and Work Document*.

1.8.5. Inspect all wash rack equipment for serviceability (e.g., water hoses, pumps, air hoses, powered wash equipment, support equipment, etc.).

1.8.5.1. **(Added-Barksdale)** The wash crew supervisor will ensure maintenance stands and all other equipment used during the wash is clear of the aircraft and secured. Place equipment stands in their designated hold areas. All powered support equipment will be removed.

1.8.6. Ensure wash rack facility and surrounding area is clean before and after use.

## Chapter 2

### AIRCRAFT CORROSION PREVENTION AND CONTROL PROGRAM

#### 2.1. General Policy .

2.1.1. Maintain aircraft paint scheme, markings, and decals IAW TOs 1-1-8, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*, and 1-1-691, *Cleaning and Corrosion Prevention and Control, Aerospace and Non-aerospace Equipment*, and this instruction.

2.1.2. Do not apply unauthorized decals or markings to aircraft. AFGSC/A4A is the approval authority for deviations from the instructions. Once submissions are approved by the WG/CC, submit drawings, photos or paintings for approval to AFGSC/A4A.

2.1.3. Aircraft transferring from other commands should comply with AFGSC instructions within 90 days after transfer.

2.1.4. Appearance Standards. Maintain aircraft paint, markings, and corrosion preventive coatings in a manner that will enhance the overall appearance and provide for the best corrosion protection.

2.1.4.1. Markings, warnings, and decals shall be legible and distinct.

2.1.4.2. Inspect and clean aircraft IAW applicable TOs or as needed to maintain acceptable cleanliness and corrosion prevention.

2.1.5. Repainting aircraft, communications-electronic systems, or support equipment solely for beautification purposes is not authorized.

2.1.6. CPAB. CPAB requirements for aircraft units will be fulfilled through the annual aircraft/helicopter CPABs.

2.1.7. Lube helicopters and drain pitot-static system within four hours after wash. Enter a red X entry for lube and pitot-static drain on aircraft AFTO Form 781A.

2.1.8. Apply soil barrier as needed to the tail boom areas affected by engine exhaust on the UH-1N helicopters.

2.1.9. Aircraft coatings. Repair deteriorated aircraft coatings and areas of corrosion when discovered in order to provide continued surface protection. Protect metals unable to receive a primer with an approved coating such as corrosion preventative compound.

#### 2.2. Aerospace Vehicle Coating and Marking Requirements.

2.2.1. This section provides guidance for applying command approved, non-United States Air Force (USAF) standard aircraft coatings and markings as authorized in TO 1-1-8. Paint schemes/configurations and USAF standard aircraft markings will be applied in accordance with TO 1-1-8 and the applicable aircraft technical order.

2.2.2. Coating System Scoring and Maintenance. All AFGSC units, with the exception of the 509 BW B-2 fleet, are required to score aircraft coating systems every 6 months to determine when restoration or touch-up is required. Aircraft painting will be scheduled on a "worst is first" basis to maintain coating system integrity. Supervisors will use rating to

determine corrosion treatment/paint scheduling priority. Units are required to adopt maintenance-painting techniques stated in TO 1-1-8 to maintain aircraft corrosion protection between overcoats.

2.2.2.1. **(Added-Barksdale)** Schedule aircraft requiring paint touch up for maintenance at the CCF. At a minimum a qualified Structural Maintenance Journeyman will determine the amount of time required for aircraft touch up. Aircraft paint conditions will be scored in conjunction with the 120 day wash cycle. Scoring results will be maintained by 2 MXS/MXMFS. 2 MXS Eagle Supervisor will relay score results to applicable AMU/Plans and Scheduling (P&S) as needed to schedule aircraft into CCF hangar. The number of days is based on the following point system:

01-25 points - 1 Day

26-50 points - 2 Days

51-75 points - 3 Days

76-105 points - 4 Days

2.2.2.2. **(Added-Barksdale)** For aircraft requiring tail markings (unit designator, squadron tail stripe, command/wing decals) as well as crew chief blocks and commanders' names, a 3- day time frame is required and a 4-day time frame for Flagship aircraft.

2.2.3. Paint scheme. UH-1N aircraft will use a camouflage paint scheme on main airframes.

**2.3. Aircraft Markings.** Aircraft markings will be applied to aircraft as specifically authorized by this instruction, TO 1-1-8, or the applicable aircraft technical orders. Low Observable (LO) aircraft markings not currently approved require a waiver from HQ AFGSC/A4A with System Program Directorate (SPD) approval due to strict survivability analysis requirements. Aircraft inputs to depot will be marked IAW with Air Force directives and this instruction only, unless otherwise approved by HQ AFGSC/A4A. HQ AFGSC/A4A is the point of contact for B-1, B-2, B-52, UH-1N and T-38A aircraft painting and markings. All aircraft markings and basic paint schemes will be maintained intact, legible and distinct in color. Command standardization of markings by mission design series (MDS) is of primary concern. AFGSC specific requirements are located in [Attachment 2](#).

2.3.1. Stenciling. Markings may be applied using stencils or decals. Refer to TO 1-1-8 and TO 1H-1(U)N-3-1, *Structural Repair, USAF Series TH-1H and UH-1N Helicopters*, if applicable, to determine the compatibility of stenciling paints, paint finishes and decal applications.

2.3.2. Command Insignia. The application of the command insignia on aircraft is mandatory. Size and location of command insignias by MDS are specified in [Attachment 2](#).

2.3.3. Organizational Insignia (Wing). The application of wing insignia is mandatory. Insignia will be applied IAW [Attachment 2](#). **Note:** Wing Insignia is optional for UH-1N aircraft. If used, Wing insignias will be the same color scheme as the command insignia.

2.3.4. Organizational Insignia (Squadron). Squadron insignia may be applied to B-52 aircraft at the wing's option IAW [Attachment 2](#). **Note:** Squadron Insignia is optional for

UH-1N aircraft. If used, Squadron insignias will be the same color scheme as the command insignia.

2.3.5. Distinctive Unit Aircraft Identification Marking. The application of the unit designator is mandatory for AFGSC aircraft unless otherwise directed. HQ AFGSC/A4A is the office of primary responsibility (OPR) for the assignment of unit designators. The primary factor used to determine appointment of unit designators is the aircraft/unit assignment location. TO 1-1-8, or the applicable aircraft TO, will provide color restrictions and location for the unit designator. The unit designator will be applied in accordance with guidelines in [Attachment 2](#) and [Attachment 3](#).

2.3.6. Tail Stripe/Art. Tail stripes/art are applied as a wing option, used to identify aircraft operation squadrons and display unit heritage. The Wing Commander must approve all tail stripe/art designs. Each operations squadron may have a tail stripe/art unique to that squadron. The use of the same tail stripe/art by two or more squadrons within a wing is not permitted. The stripe may be any color, except B-2, or pattern, and may contain a logo. Photographs of locally approved tail stripe designs must be provided to HQ AFGSC/A4A for review and file. Units will not repaint tail flashes/stripes during deployed operations. See [Attachment 2](#). **Note:** UH-1N aircraft tail stripe/art will be applied at the lower portion of the vertical stabilizer. The height of the stripe/art will not exceed 9 inches. The stripe/art must match gloss requirements of the basic paint scheme (i.e., aircraft with flat camouflage schemes require application of stripe/art in flat colors).

2.3.7. Tail Markings (UH-1N applicable): See [Attachment 2](#).

2.3.8. Aircrew and Crew Chief Names (Optional). Aircrew/Crew Chief names may be applied to all command aircraft. Crew Chief/assistant(s) names shall be applied to all aircraft assigned to units with an established Dedicated Crew Chief (DCC) program. All names must be removed IAW TO 1-1-8 prior to deployment from home station in direct combat zones or when participating in contingencies that may subject aircraft to hostile fire abroad. Application of nicknames, punctuation, and/or call signs is not permitted. All aircraft in the wing will be standard with the exception of the designated Commander's aircraft, which may have different lettering but will not exceed established height requirements. UH-1N lettering will not exceed 3 inches in height. A background block for pilot/Crew Chief names may be used. The block should be in contrasting color to the section of the aircraft where applied. For B-1 and B-52 aircraft, the Wing Commander may approve a locally designed name block to promote unit pride. Photographs must be provided to HQ AFGSC/A4A for review and file. See [Attachment 2](#) for approved locally designed name blocks. For B-2 aircraft, a locally procured black nose gear door cover matching the sizing/placement criteria in [Attachment 2](#) may be installed.

2.3.8.1. **(Added-Barksdale)** Crew chiefs are responsible for making an entry in IMDS and the AFTO Form 781A's with the correct spelling of names.

2.3.9. Commander's Aircraft Markings. Commander's aircraft referred to in this instruction are those designated as NAF, Wing, or OG commanders of flying squadrons and Operational Test aircraft (OT). The NAF Commander may select one wing within the command to have an aircraft specifically marked. Wing Commanders may select one aircraft per MDS to apply commander type markings. All other commanders are authorized only one aircraft each to be marked with standardized commander type markings. Standard insignias and

markings will not be altered in location, dimension, or configuration to accommodate commander's aircraft markings. **Note:** Commander's Aircraft Markings not permitted on UH-1N aircraft. The following are markings authorized for use on commander's aircraft:

2.3.9.1. Wing and/or NAF insignias. The wing and/or NAF insignias will be applied on the right forward fuselage and a collage of assigned flight/operations squadron insignias will be applied on the left forward fuselage.

2.3.9.2. Highlighting of unit designator and bomb wing designator. All highlighting will be done in contrasting gray, black or white as long as it meets primary basecoat gloss requirements (i.e., gloss, camouflage or gunship). All unit designators and radio call numbers will remain on vertical stabilizers or as depicted in applicable technical orders.

2.3.9.3. Wing Commanders must approve the markings, and digital photographs must be provided to AFGSC/A4A for review and file prior to being applied to aircraft (see paragraph [2.3.20.](#)).

2.3.10. Nose Numbers (optional). If used, aircraft nose numbers shall be in block or Helvetica letters, not to exceed five digits. Specific location and size for each different type aircraft is listed in [Attachment 2](#). The paint material(s) used to apply nose numbers shall have the same gloss requirement as the base aircraft coating.

2.3.11. Bomber Combat Marking. Designated bomber aircraft with a successful weapons release in combat operations are authorized to display a conventional bomb and/or Conventional Air Launched Cruise Missile (CALCM) silhouette on that aircraft. These markings will be applied in contrasting shades that conform to the basic aircraft camouflage requirements. B-1, B-2 and B-52 combat marking configurations are located in [Attachment 2](#).

2.3.12. Nose Art. For purposes of clarification, "nose art" shall be the term used to identify specialized artwork applied to any area of the aircraft. Nose art is only authorized on the B-1 and B-52. The only exception to this policy is application of the AF approved "Let's Roll" nose art design. Wing Commanders may designate one aircraft within the wing to apply the "Let's Roll" design. The aircraft selected is at the Wing Commander's discretion. Waivers for additional aircraft will not be entertained. Placement of nose art is authorized on the left side of the aircraft only. Authorized nose art is limited to 3 feet by 3 feet in size. Note: UH-1N nose art is authorized on the Upper Hinged Nose Door of the aircraft only and art is limited to size of the door. Nose art shall meet the following criteria:

2.3.12.1. Be distinctive, symbolic, and designed in good taste.

2.3.12.2. Enhance unit pride.

2.3.12.3. Comply with equal opportunity policies.

2.3.12.4. Match gloss requirements of the basic paint scheme (i.e., aircraft with flat camouflage schemes require application of nose art in flat colors).

2.3.12.5. All designs will be reviewed and approved by the Wing Commander and routed to approval authority at AFGSC/A4A, before being applied to aircraft. Include digital photographs, using criteria in paragraph [2.3.20.](#) when routing design requests to AFGSC/A4A. World War II nose art that meets the above criteria may be used. Cartoon-type characters may be used; however, the unit will be responsible for all

copyright issues. Removal of nose art prior to deployment will be at the discretion of the Wing Commander.

#### 2.3.13. Unique Unit Markings.

2.3.13.1. Anniversary Markings. When applied, anniversary markings will not interfere with required aircraft markings and must be removed immediately after the anniversary period (1-year maximum). Waivers are not required. Wing Commanders must approve the markings, and digital photographs must be provided to AFGSC/A4A for review and file.

2.3.13.2. State flags and logos other than anniversary type are not considered unit unique markings.

2.3.14. Aircraft Naming. Route requests to name AFGSC aircraft through wing PA to AFGSC/A4A. AFGSC/A4A will coordinate with AFGSC/PA before submitting to AF/CV for approval. This includes markings previously considered unit unique and are community related/appreciation types such as "Spirit of," "City of" and "State of." Naming aircraft is a tradition designed to commemorate or honor individuals, geographic locations, or events either for the support provided by the Air Force on a long-term basis, or because of its significance to Air Force history or heritage. Recommendations must include a proposed name, suggested aircraft and tail number, and detailed justification for the proposed name. Contact your wing Public Affairs office for details.

2.3.15. Aircraft Travel Pods. Travel pods will be painted in gloss paint the same color as the aircraft with no additional markings. Travel pods designated for commanders may contain the position and name of the individual and appropriate insignia. Lettering may be of any color and style, but shall not exceed 6 inches in height. Commander's travel pod paint scheme, final marking sizes, and placements will be approved by the WG/CC and documented within local unit operating instructions.

2.3.16. Paint Identification Placard. The paint identification block is a mandatory marking. The block may be of a unique design, or state outline, but must not exceed 6 inches by 6 inches in size and will match the color of other markings on the aircraft. Waiver requests are not required for this item. However, Wing Commander approval is required, and photographs of the design must be provided to HQ AFGSC/A4A for review and file (N/A B-2).

2.3.17. Competition Aircraft. Units participating in competitions will follow the guidelines established in competition rules for aircraft appearance. Competitions shall be considered "come as you are" and no waivers will be granted. "Come as you are" is defined as no special effort, painting, or additional markings applied to enhance or improve the overall appearance of the aircraft. This includes polishing of titanium, commander markings, etc.

2.3.18. Aircraft Transfer. The following markings must be removed prior to formal transfer of aircraft to other units or MAJCOMs (aircraft retiring to the Aerospace Maintenance and Regeneration Group (AMARG), need not have any markings removed).

2.3.18.1. Organizational insignias.

2.3.18.2. Distinctive unit aircraft identification.

2.3.18.3. Tail stripe.

2.3.18.4. Aircrew and Crew Chief names.

2.3.18.5. Unit-unique markings.

2.3.18.6. Nose art may be retained if gaining unit agrees.

2.3.19. Waivers. Wing Commanders must submit waiver requests for non-standard markings to HQ AFGSC/A4A for approval/disapproval. Waivers that are in violation of aircraft technical orders will not be accepted. Waiver requests must include the following:

2.3.19.1. Clear statement of present procedure/marking.

2.3.19.2. Clear statement of proposed change.

2.3.19.3. Justification to include historical significance, if applicable.

2.3.19.4. Photographs: Two high-quality digital color photographs, one of present marking and one of requested change.

2.3.20. Photo Requirements. All photo requirements may be met by a high quality digital photograph. All AFGSC units must submit one full length (landscape orientation) of the commander's aircraft each time a marking change occurs to HQ AFGSC/A4A for review and file. Units will provide photos of unique markings for all local option changes authorized by this instruction (e.g., tail stripe/name block design and/or color changes, paint data placard, nose art, etc.) to HQ AFGSC/A4A for review and file.

2.3.21. Total Force Integration (TFI). For TFI locations under the classic association, coordination is required from both wing commanders to identify specific aircraft for unit identification and/or organizational insignia changes. These proposed changes are in support of ownership, pride and esprit de corps between active duty, reserve, and guard partnering wings. Once change requests are approved by the principal aircraft owning Wing Commander, the request will be routed to HQ AFGSC/A4A for final review and approval IAW TO 1-1-8.

#### **2.4. Aerospace Ground Equipment (AGE) Tone-Down Procedures.**

2.4.1. When feasible, equipment will be completely stripped and properly prepared IAW TO 1-1-8 and TO 35-1-3, *Corrosion Prevention and Control, Cleaning, Painting, and Marking of USAF Support Equipment (SE)* before applying polyurethane coatings.

2.4.2. Minimum reflectorizing requirements will be IAW TO 35-1-3. Black subdued reflectorized tape will be used in lieu of white when left optional by TO 35-1-3.

2.4.3. Dedicated squadron identification markings will not exceed a 2-inch by 6-inch area below two field numbers if the equipment area permits.

2.4.4. Locally devised field numbers will be black.

2.4.5. Interior areas of AGE exposed during operation will be toned down to match exterior painted surfaces.

2.4.6. AGE arriving on base and requiring tone down will be scheduled for paint within 90 days of receipt, and completed within 24 months.



### Chapter 3

## ICBM CORROSION PREVENTION AND CONTROL ROLES AND RESPONSIBILITIES

**3.1. HQ AFGSC/A4B Responsibilities.** HQ AFGSC/A4B is responsible for overall ICBM corrosion program management within the command. HQ AFGSC/A4B will appoint an ICBM Corrosion Prevention and Control Functional Manager. The functional manager will:

- 3.1.1. Manage AFGSC's Corrosion Prevention and Control Program for the ICBM weapon system.
- 3.1.2. Serve as the command's focal point for corrosion prevention and control issues, and coordinate all actions with staff directorates as appropriate.
- 3.1.3. Establish written guidance for the ICBM Corrosion Prevention and Control Program.
- 3.1.4. Establish minimum requirements for corrosion control training.
- 3.1.5. Coordinate MAJCOM approval for test programs through the ICBM Weapon System Team.
- 3.1.6. Ensure Air Force Materiel Command (AFMC) conducts annual site surveys for ICBM facilities.
- 3.1.7. Co-chair an annual ICBM Corrosion Prevention Advisory Board (CPAB) conference with the ICBM Systems Directorate.
- 3.1.8. Attend Air Force Corrosion Conferences and Environmental Symposiums.

**3.2. Maintenance Group and 576 FLTS Commander Responsibilities.** The MXG/CC and 576 FLTS/CC are responsible for establishing and maintaining effective Corrosion Prevention and Control Programs. The MXG/CC and 576 FLTS/CC will:

- 3.2.1. Ensure adequate facilities, equipment, manpower, material and funding are available to support a sound corrosion prevention and control program.

**3.3. Unit Corrosion Prevention and Control Program Manager Responsibilities.** The Corrosion Shop Foreman and the Corrosion Quality Assurance Evaluator (QAE) serve as the Unit Corrosion Prevention and Control Program Manager for their respective units and will:

- 3.3.1. Act as the clearinghouse for all corrosion and coatings related information and taskings.
- 3.3.2. Provide technical guidance on corrosion prevention and control issues.
- 3.3.3. Serve as the point of contact for corrosion prevention and control between the unit and AFGSC/A4B.
- 3.3.4. Develop and publish local corrosion prevention training requirements as required.
- 3.3.5. Ensure military technicians, Department of Air Force (DAF) civilians, and government contracted corrosion control technicians:
  - 3.3.5.1. Inspect for and treat corrosion IAW technical orders using approved products.

3.3.5.2. Handle and dispose of hazardous materials/waste IAW local, state, and federal guidelines.

3.3.6. Ensure only authorized chemical cleaning materials and corrosion removal methods are used, and that Safety Data Sheets are available for each chemical used.

3.3.7. Ensure required equipment is obtained for an efficient and effective corrosion prevention and control program.

3.3.8. Enforce the use of approved coating materials and cleaning compounds as determined by TOs, QPL, and QPD.

3.3.9. Attend the annual ICBM CPAB, AF Corrosion Conference, AF Environmental Symposium and Foreman's Meeting as specified by the ICBM Corrosion Prevention and Control Functional Manager.

## Chapter 4

### ICBM CORROSION PREVENTION AND CONTROL PROGRAM

#### 4.1. General Policy.

4.1.1. Only qualified government or contract corrosion control technicians (CCT) will perform coating removal/application tasks required by applicable -6 work cards.

4.1.2. Specifications for contracts affecting ICBM systems/subsystems must be routed through the Unit Corrosion Prevention and Control Program Manager for approval prior to implementation. The Unit Corrosion Prevention and Control Program Manager is responsible for ensuring coating systems used by contractors meet AFI and technical order requirements.

4.1.3. Missile Engineering must coordinate all Master Change Log activities and RP/RPIE changes through the Unit Corrosion Prevention and Control Program Manager.

4.1.4. On-base launch facility trainers will be scheduled on a 3-year cycle for corrosion inspection/treatment using the applicable LF -6 work cards.

4.1.5. Federal, state and local environmental regulations must be followed.

**4.2. Program.** The ICBM Corrosion Prevention and Control Program consists of frequent cleaning, corrosion inspections and early detection, application of proper treatment materials/procedures, and maintenance painting. Maintenance painting is defined for field purposes as spot painting, sectionalized painting, and complete scuff sand and overcoat. The corrosion prevention and control program is divided into three components.

4.2.1. **Prevention.** Corrosion prevention must be a proactive part of the overall program. Use of proper materials and technical order procedures during maintenance activities are critical to program success.

4.2.1.1. Frequent cleaning has proven to be the most effective means of preventing corrosion.

4.2.1.2. All maintenance personnel must perform general housekeeping and cleaning as part of every maintenance activity, and supervisors are required to enforce these standards.

4.2.2. **Detection.** All maintenance personnel will perform corrosion inspections as part of routine maintenance activities.

4.2.2.1. Supervision at all levels must emphasize active participation by all technicians during scheduled periodic inspections as well as unscheduled maintenance.

4.2.2.2. Conduct inspections for corrosion in concealed/hard to access locations when opened for any other work.

4.2.3. **Treatment.**

4.2.3.1. Units will maintain weapon system components IAW [Attachment 4](#).

4.2.3.2. There are two general categories of treatment.

- 4.2.3.2.1. Remove and replace. Performed by maintenance technicians responsible for system maintenance when component is beyond repair or treatment in place is not possible or cost effective.
- 4.2.3.2.2. Treatment in place. Minor corrosion can be treated by maintenance technicians during the course of routine maintenance as directed by weapon system specific TOs. Large-scale or more severe corrosion on installed equipment/components will be treated by corrosion specialists.
- 4.2.3.3. LF topside areas are extremely susceptible to environmental factors. The Corrosion Shop Foreman must exercise sound professional judgment when determining when to spot paint or completely recoat surfaces. Complete recoats are authorized for topside surfaces.
- 4.2.3.3.1. For areas other than LF topside, limit painting to the smallest practical area required to maintain a professional appearance and an effective coating system.
- 4.2.3.4. All coating systems used on weapon system components and structures, to include real property installed equipment and operational ground equipment, will comply with technical requirements in TOs 21M-LGM30F-101, *LGM30 Weapon System Corrosion Control and Treatment*, 1-1-8, 1-1-691, 35-1-3, or applicable equipment TOs.
- 4.2.3.5. Units will deplete existing stocks of paint prior to switching to color schemes specified in this instruction. All coatings purchased after implementation of this instruction will be IAW [Attachment 4](#).
- 4.2.3.6. A detailed paint plan for living facilities or other above ground facilities at the Missile Alert Facility is not required.
- 4.2.3.7. Repainting missile system facilities/components, communications- electronic systems, or support equipment solely for beautification purposes is not authorized.
- 4.2.3.7.1. Utilization of corrosion specialists for anything other than weapon system maintenance requires authorization of the MXG/CC or 576 FLTS/CC.
- 4.2.3.8. Do not paint equipment/components where the operational capability or designed function of an item would be impaired by paint. Corrosion specialists will not paint the following areas:
- 4.2.3.8.1. Fabric or plastic surfaces.
- 4.2.3.8.2. Bare or untreated concrete surfaces (exception: warning lines, caution lines, designators, etc. required by technical orders.)
- 4.2.3.8.3. Surfaces in contact with weather seals and gaskets (exception: surfaces specifically directed by TO 21M-LGM30F-101 and TO 21M-LGM30F-112, *General Inspection and Repair Procedures ICBM Systems*).
- 4.2.3.8.4. Radio frequency interference (RFI) gaskets/shields and surfaces in contact with RFI gaskets/shields.
- 4.2.3.8.5. Machined surfaces of moving parts.
- 4.2.3.8.6. Identification plates and warning signs.

- 4.2.3.8.7. Lubrication devices and grease fittings.
- 4.2.3.8.8. Electrical terminal strips, ground straps, connectors, wires, and bus bars.
- 4.2.3.8.9. Blast valve assemblies, hydraulic and pneumatic tubing, fittings and controls.
- 4.2.3.8.10. Shock Isolator piston rods.
- 4.2.3.8.11. Abrasive (non-skid) surfaces/floor plates.
- 4.2.3.8.12. Asphalt shingles.
- 4.2.3.8.13. Equipment drawers.
- 4.2.3.8.14. Sound-proofed surfaces.
- 4.2.3.8.15. Wooden ladders.

### 4.3. Training .

4.3.1. All personnel who dispatch to LFs and Missile Alert Facilities (MAF) to perform maintenance on missile systems will receive initial and annual ICBM corrosion prevention and control training IAW AFI 21-202V1, *Missile Maintenance Management*. ICBM corrosion control specialists are exempt from this requirement.

4.3.2. Training will be documented in the Integrated Maintenance Data System (IMDS).

4.3.3. ICBM maintenance units will use standardized AFGSC products for ICBM corrosion prevention and control training. If an AFGSC product is not available, units may use locally-developed training provided it has been approved by the ICBM Corrosion Prevention and Control Functional Manager and includes the following minimum requirements:

- 4.3.3.1. How to identify, report and record corrosion.
- 4.3.3.2. Corrosion prone areas.
- 4.3.3.3. Possible causes of corrosion.
- 4.3.3.4. Proper use of cleaning compounds.

4.3.4. ICBM corrosion control specialists will attend site-specific environmental compliance training as designated by the installation Environmental office.

4.3.5. The Society for Protective Coatings (SSPC) and the National Association of Corrosion Engineers (NACE) offer various training courses for coating systems, application and inspection. As unit funds are available, corrosion program/functional managers, instructors and evaluators should attend SSPC or NACE course(s) that relate to their position and enhance their professional knowledge.

LAWRENCE S. KINGSLEY, SES  
Director, Logistics, Engineering and Force Protection

Ty W. Neuman, Colonel, USAF  
Commander, 2d Bomb Wing

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 21 May 2015

AFI 21-202V1, *Missile Maintenance Management*, 17 Sep 2014

**(Added-Barksdale)** AFI 21-202V1, *Missile Maintenance Management*, 18 Jan 2017

AFI 33-360, *Publications and Forms Management* 25 Sep 2013

**(Added-Barksdale)** AFI 33-360, *Publications and Forms Management*, Table 1.1, 01 Dec 2015

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 Jun 2012

AFMAN 32-1084, *Facility Requirements*, 20 Apr 2012

AFMAN 33-363, *Management of Records* 1 Mar 2008

**(Added-Barksdale)** AFMAN 33-363, *Management of Records*, 01 Mar 2008

**(Added-Barksdale)** T.O. 1-1-691, *Aircraft Weapons Systems--Cleaning and Corrosion Control*, 20 Feb 2016

TO 00-5-1, *AF Technical Order System*, 1 Oct 2014

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, 9 Aug 2013

TO 1H-1(U)N-3-1, *Structural Repair, USAF Series TH-1H and UH-1N Helicopters*, 15 Apr 2013

TO 1-1-8, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*, 12 Jan 2010

TO 1-1-691, *Cleaning and Corrosion Prevention and Control, Aerospace and Non-aerospace Equipment*, 2 Nov 2009

TO 35-1-3, *Corrosion Prevention and Control, Cleaning, Painting, and Marking of USAF Support Equipment (SE)*, 26 Apr 2014

TO 21M-LGM30F-101, *LGM30G Weapon System Corrosion Control and Treatment*, 01 Apr 2012

TO 21M-LGM30F-112, *General Inspection and Repair Procedures ICBM Systems*, 01 Oct 2012

***Prescribed Forms***

No forms are prescribed by this instruction

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

*Abbreviations and Acronyms*

**AETC**—Air Education and Training Command  
**AFRC**—Air Force Reserve Command  
**AFGSC**—Air Force Global Strike Command  
**AFGSCI**—Air Force Global Strike Command Instruction  
**AFI**—Air Force Instruction  
**AFIT**—Air Force Institute of Technology  
**AFMAN**—Air Force Manual  
**AFMC**—Air Force Materiel Command  
**AFOSH**—Air Force Occupational Safety and Health  
**AFRIMS**—Air Force Records Information Management System  
**AFTO**—Air Force Technical Order  
**AGE**—Aerospace Ground Equipment  
**AMARG**—Aerospace Maintenance and Regeneration Group  
**AMXS**—Aircraft Maintenance Squadron  
**ANG**—Air National Guard  
**ASM**—Aircraft Structural Maintenance  
**CALCM**—Conventional Air Launched Cruise Missile  
**(Added-Barksdale) CCF**—Corrosion Control Facility  
**CPAB**—Corrosion Prevention Advisory Board  
**DCC**—Dedicated Crew Chief  
**HQ**—Headquarters  
**IAW**—In Accordance With  
**IMDS**—Integrated Maintenance Data System  
**(Added-Barksdale) IMDS**—Integrated Maintenance Data Sheet  
**LO**—Low Observable  
**LOASM**—Low Observable Aircraft Structural Maintenance  
**MAJCOM**—Major Command  
**MDS**—Mission Design Series  
**MXG**—Maintenance Group  
**NACE**—National Association of Corrosion Engineers  
**NAF**—Numbered Air Force

**(Added-Barksdale) NLT**—No Later Than

**OG**—Operations Group

**OPR**—Office of Primary Responsibility

**(Added-Barksdale) P&S**—Plans and scheduling

**QAE**—Quality Assurance Evaluator

**QPD**—Qualified Products Database

**QPL**—Qualified Products Listings

**RDS**—Records Disposition Schedule

**SE**—Support Equipment

**SPD**—System Program Directorate

**SSPC**—Society for Protective Coatings

**TFI**—Total Force Integration

**TO**—Technical Order

**USAF**—United States Air Force



## Attachment 2

## AIRCRAFT MARKING SPECIFICATIONS

Table A2.1. Aircraft Marking Specifications.

**B-1**

**COMMAND INSIGNIA:** 24 inches (subdued).

Located 11 inches down from the tail stripe, top of patch 38 inches in from tail leading edge and 36 inches in from leading edge of rudder on both sides.

**ORGANIZATIONAL INSIGNIA:** 24 inches (subdued).

Located 6 inches below and centered on the OSO/DSO windows.

**UNIT IDENTIFIER:** 30 inches.

Located 7 inches down from command insignia. On right side of tail, trailing edge of first letter will lay along a vertical line from center of sword in command insignia. On left side of tail, trailing edge of second letter in unit designator will lay along a vertical line from center of sword in command insignia.

**PILOT/AIRCREW/CREW CHIEF NAMES:**

Pilot/aircrew: Centered on forward escape hatch side window.

Crew chief/assistant: Left nose gear door, centered.

**NOSE NUMBERS:**

Last three/four digits of tail number, 3 inches in height, on nose gear strut, both sides.

**COMBAT MARKINGS:**

Bomb markings will be located on the right portion of the left nose gear door exterior. These markings will consist of a 5-inch bomb silhouette applied in a row not to exceed 10 in each row. Once 10 silhouettes are achieved, a single bomb silhouette with the number a "10" will represent a row.

**B-2**

**COMMAND INSIGNIA** 24" (subdued).

Located on left side at FS 304.5 (center of crest), with crest bottom at WL 167.2.

**ORGANIZATIONAL (WING) INSIGNIA: 24"** (subdued).

Located on right side of aircraft at FS 304.5 (center of crest), crest bottom at WL 167.2. The Wing Commander may approve an additional insignia to be installed 6" aft of organizational insignia on aircraft for esprit-de-corps in classically associated TFI units.

**DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKING: 16"** (subdued).

30° negative slant. Top of unit designator to be 15" from top of main landing gear door, 50" from extreme aft end of door.

**TAIL STRIPE:**

The tail stripes will be 18' long by 11.25" high from leading edge to trailing edge of main landing gear doors.

**AIRCRAFT NAME:**

(all measurements to top of letters)

"SPIRIT" located: 10.5" from top of main landing gear door, 57" from extreme forward of door in 8" block letters with a 30° negative slant. "OF" located: 19.5" inches down from top of main landing gear door, centered underneath the "SPIRIT" in 6" block letters with a 30° negative slant. "STATE/CITY" located: 26.5" from top of main landing gear door, centered beneath the "SPIRIT" in 8" block letters with a 30° negative slant.

**PILOT/AIRCREW/CREW CHIEF NAMES:**

(all measurements to top of letters)

Painting is the preferred method of application for exterior markings on the B-2. A sticker may be applied in lieu of painting aircraft crew names on the Nose Landing Gear Door provided they are removed before actual combat missions. As an additional option, a locally-procured, black nose gear door cover matching the sizing/placement criteria may be installed. Pilot: The word "PILOT" is centered on left half of nose gear door 8" from the top of the door in 1.75" letters. The pilot's name is centered below the word "PILOT," 13.5" from the top of the door. Mission Commander: The word "MISSION COMMANDER" is centered on right half of nose gear door, 8" from top of door in 1.75" letters. The mission commander's name is centered below "Mission Commander," 13.5" from the top of the door. Crew Chief/Assistant: The letters "DCC" are centered on nose gear door, 26" from top of door, 1.75" letters. The Crew Chief's name is centered 1" below "DCC" also in 1.75" letters. The letters "ADCC" are centered 1" below the Crew Chief's name in 1.75" letters and the assistant Crew Chief's name is centered below with 1" spacing from "ADCC," also in 1.75" letters.

**NOSE NUMBERS:**

Nose numbers are applied IAW T.O. 1B-2A-2-11GS.

### **COMBAT MARKINGS:**

Units may apply a single bomb or CALCM silhouette, not to exceed 3 inches in height, on the exterior of the nose landing gear door for each combat sortie flown with a successful weapons release. These silhouettes will contain the appropriate combat operation acronym, (example, "OEF") embedded in the center of the marking.

### **B-52**

**COMMAND INSIGNIA:** 24" (subdued).

Insignia is applied to both sides of the vertical stabilizer. Top of insignia will be located 41.5" below tail stripe. Leading edge of insignia will be 62" in from leading edge of tail on both sides of tail. Bottom point/tip of insignia will be located on center seam of main spar line.

**ORGANIZATIONAL INSIGNIA:** 24" (subdued).

Right side: On forward fuselage, center of insignia at B.S. 218.7 and W.L.187.5.

Left side: On forward fuselage, center of insignia at B.S. 218.7 and W.L.187.5.

### **DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKINGS:**

Use two-letter base designation (**Attachment 3**) in 42" black block letters.

Left side: Top of unit designator located 36" below box antenna. The trailing edge of the second letter is on a vertical line down from the tip of the command insignia, using the lower point of the center lightning bolt in the insignia as a line up reference.

Right side: Top of unit designator located 36" below box antenna. The trailing edge of the first letter is on a vertical line down from the tip of the command insignia, using the lower point of the center lightning bolt in the insignia as a line up reference.

### **DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKINGS ON COMMANDER'S AIRCRAFT:**

Use two-letter base designation (**Attachment 3**) in 42" black block letters. When used in conjunction with the bomb wing designator the location will be as follows:

Left Side: Top of unit designator located 20" below box antenna. The trailing edge of the second letter is on a vertical line down from the tip of the command insignia, using the lower point of the center lightning bolt in the insignia as a line up reference.

Right Side: Top of unit designator located 20" below box antenna. The trailing edge of the second letter is on a vertical line down from the tip of the command insignia, using the lower point of the center lightning bolt in the insignia as a line up reference.

**DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKINGS ON BOMB WING COMMANDER'S AIRCRAFT:**

Use two-letter base designation (**Attachment 3**) in 18" black block letters. Left and right side: Top of bomb wing designator will be located 6" below unit designator and aligned with radio call numbers.

**TAIL STRIPE:**

The tail stripe will be applied at the upper portion of the vertical stabilizer, and must be in the form of a straight horizontal stripe. The overall height will not exceed 15".

**PILOT/AIRCREW/CREW CHIEF NAMES:**

Pilot/aircrew: Centered under pilot's window.

Crew Chief/assistant: Block is 15" by 36". Block is located on BS 261.00 and WL 139.00. 2

BW Crew chief/assistant: Block is the shape of Louisiana and 30" by 24". Forward bottom edge of block is aligned with BS 258.70 and WL 139.

5 BW Crew Chief/assistant: Block is the shape of North Dakota and 15" by 35.547 inches. Forward bottom corner of block is aligned with BS 267 and WL 139.

Style and size of letters are a unit option but will not exceed 3" in height.

A background block for Pilot/Crew Chief names may be used. The block should be in contrasting color to the section of the aircraft where applied. The Wing Commander may approve a locally designed name block to promote unit pride.

**NOSE NUMBERS:**

Last four digits, 12" in height, located immediately aft of BS 236.30 and centered on WL 187.5.

**COMBAT MARKINGS:**

Bomb markings will be enclosed in a 27" by 27", 1" bordered area centered on BS 218.70 and the bottom edge on WL 139. A conventional bomb or CALCM silhouette may be displayed in the box for each combat sortie flown with a successful weapons release. The CALCM marking will be a maximum of 10" and the conventional bomb silhouette a maximum of 5". Once the box is full, an existing column of CALCM/Bombs will be removed and replaced with a single CALCM/Bomb silhouette containing a number 10 at the top of the applicable row.

**T-38**

**COMMAND INSIGNIA:** 10" centered.

Insignia is applied to both sides of the vertical stabilizer. Vertically: Top of insignia 4" below

anti-collision light. Horizontally: On line with trailing edge of anti-collision light.

**ORGANIZATIONAL INSIGNIA:**

10" (subdued/CTP, full color AT-38) centered; Vertically: On 3 o'clock position (left) and 9 o'clock position (right). Horizontally: Center of insignia 24" aft of intake lower opening.

**DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKING:**

Use two-letter base designation (**Attachment 3**) in 12" block letters centered; Vertically: 4" below command insignia. Horizontally: Leading edge of first letter centered on command insignia.

**TAIL STRIPE:**

The tail stripe will be applied at the upper portion of the vertical stabilizer, and must be in the form of a straight horizontal stripe. The overall height will not exceed 9".

**PILOT AND CREW CHIEF NAMES:**

Pilot: Name centered on left forward canopy rail. Crew Chief: Name centered on left aft canopy rail.

Assistant Crew Chief: Name centered on right aft canopy rail. Style and size of letters are a unit option but will not exceed 3" in height. A background block for Pilot/Crew Chief names may be used. The block should be in contrasting color to the section of the aircraft where applied.

**NOSE NUMBER:** 4" block numbers.

Last three/four digits of the tail number horizontally on both sides of nose gear door.

**UNIQUE PAINT SCHEME:**

Companion Trainer Program T-38 aircraft are authorized a gloss gray paint scheme, federal stock code number 16099.

**UH-1N**

**COMMAND INSIGNIA:**

10" black insignia, placed on right side door, under hinge door window and centered.

**ORGANIZATIONAL INSIGNIA (Optional):**

10" black insignia, placed on left side door, under hinge door window and centered.

**DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKING:**

Use two-letter base designation (**Attachment 3**) in 10" black block letters placed 29.5" above the tail stinger cowling edge and 2" from the trailing edge.

**PILOT/CREW CHIEF NAMES (Optional):**

May be applied to either or both pilot and co-pilot's doors. Use 4" black lettering, any font style. Units that elect to apply Pilot/Crew Chief names will use a standard scheme.

**TAIL STRIPE/ART:**

The tail stripe/art will be applied at the lower portion of the vertical stabilizer, with the bottom of stripe/art 3.5" above stringer cowling. The height of the stripe/art will not exceed 9". Art will be centered, stripe will span vertical surface. The stripe/art must match gloss requirements of the basic paint scheme (i.e., aircraft with flat camouflage schemes require application of stripe/art in flat colors).

**TAIL NUMBERS:**

The radio call numbers will be 5" black block numbers, placed 15" above stinger cowling and 2" from trailing edge.

**TAIL "USAF" MARKING:**

"USAF" marking will be 5" black block letters placed 22.5" above stinger cowling edge with letters grounded 2" from trailing edge.

**NOSE NUMBERS (Optional):** 4" numbers.

Last four digits of the tail number horizontally centered beneath the glide slope antenna.

**SIDE FUSELAGE NUMBERS (Optional):** 6" numbers.

Last two digits of the tail number, centered vertically between steps on right side only, 2" aft of crew door.

## Attachment 3

## AFGSC DISTINCTIVE UNIT AIRCRAFT IDENTIFICATION MARKINGS LIST

Table A3.1. AFGSC Distinctive Unit Aircraft Identification Marking List.

CODE	AIRCRAFT	UNIT, LOCATION
DY	B-1B	7 BW, Dyess AFB, TX
EL	B-1B	28 BW, Ellsworth AFB, SD
FE	UH-1N	90 MW, F.E. Warren AFB WY
LA	B-52H	2 BW, Barksdale AFB LA
MM	UH-1N	341 MW, Malmstrom AFB MT
OT	B-52H	53 TEG, Barksdale AFB LA
MT	B-52H UH-1N	5 BW, Minot AFB ND 91 MW, Minot AFB ND
WM	B-2A, T-38A	509, BW Whiteman AFB MO

**Attachment 4**  
**ICBM PAINT PLAN**

**Table A4.1. Paint Plan.**

<b>Launch Control Center (LCC)</b>	<b>Paint Color Code</b>	<b>Color</b>
Acoustical enclosure – external	16376	Lt Grey
Acoustical enclosure – internal	17925	White
Battery Storage below LCC floors	16376	Lt Grey
Blast door exterior and racings (except machined surfaces)	16376	Lt Grey
Blast door interior	16376	Lt Grey
Cable trays	16376	Lt Grey
Ducts, pipes and conduits	Same as associated equipment/fixtures	
Electrical surge arrestor (ESA) room walls/floor	16376	Lt Grey
Equipment racks	24525	Lt Green
ESA room panels, door and trim	16376	Lt Grey
External metal racks	24525	Lt Green
LCC liner	16376	Lt Grey
Miscellaneous tanks and brackets	Same as associated equipment/fixtures	
Shock isolators	17925	White
Tunnel junction floor	16376	Lt Grey
Tunnel junction walls	17925	White
Unit reference designator (URD) background	13655	Yellow
URD stencils	17038	Black
<b>Launch Control Equipment Building</b>		
Air conditioning equipment	16376	Lt Grey
Automatic switching unit	16376	Lt Grey
Diesel engines and switch gear	Per Manufacturer	Per Manufacturer
Diesel start battery rack	17038	Black
Electrical panels - exterior	16376	Lt Grey
Floors	16376	Lt Grey
Tanks, Ducts, pipes and conduits	Same as associated equipment/fixtures	
URD background	13655	Yellow
URD stencils	17038	Black
Walls	17925	White
<b>Launch Control Support Building</b>		
Air conditioning equipment	16376	Lt Grey
Automatic switching unit	16376	Lt Grey
Diesel engines and switch gear	Per Manufacturer	Per Manufacturer
Diesel start battery rack	17038	Black
Electrical panels - exterior	16376	Lt Grey



Floors	16376	Lt Grey
Tanks, Ducts, pipes and conduits	Same as associated equipment/fixtures	
URD background	13655	Yellow
URD stencils	17038	Black
Walls	17925	White
<b>Launch Facility Support Building (LSB)</b>		
Air conditioning equipment	16376	Lt Grey
Diesel engine and switch gear	Per Manufacturer	
Diesel start battery racks	17038	Black
Electrical panels	16376	Lt Grey
Exhaust fan	16376	Lt Grey
Exposed metal and hangar supports	Same as associated equipment/fixtures	
Floors		Red Oxide Primer
Instrument air compressor	16376	Lt Grey
Pipes, conduits and tanks	Same as associated equipment/fixtures	
Repeater telephone set	24525	Lt Green
Under floor ducting	16376	Lt Grey
URD background	13655	Yellow
URD stencils	17038	Black
Walls	17925	White
<b>Launch Facility Topside</b>		
Air intake vent plate	16376	Lt Grey
Clutter plate mast	16376	Lt Grey
Collimator Bench	17925	White
Diesel fill cover (metal or fiberglass)	16376	Lt Grey
Diesel fill pipe and cap	16376	Lt Grey
Hatch covers, grates and ladders	16376	Lt Grey
IMPSS antenna	17925	White
Launcher closure arrestors (Vandenberg)	16376	Lt Grey
Launcher closure door (top trim)	16376	Lt Grey
Launcher closure door (front, metal portion)	16376	Lt Grey
Launcher closure door revetment walls (Vandenberg)	16376	Lt Grey
Launcher closure thermal shield	36440	Non-skid Grey
LSB door/frame	16376	Lt Grey
Miscellaneous exposed metal surfaces	16376	Lt Grey
Primary access hatch hand driven linear actuator	16376	Lt Grey
Security pit and cover	16376	Lt Grey
A-Vault door	15045	Blue
Sump pump drain line	16376	Lt Grey
Transporter-erector pylons	16376	Lt Grey
Transporter-erector tie-down slots	16376	Lt Grey
UHF radio marker posts	17925	White

URD background	13655	Yellow
URD stencils	17038	Black
<b>Launch Facility Equipment Rooms</b>		
Walls and ceiling	17925	White
Ballistic actuator evener housing	15045	Blue
Launch tube heater	16376	Lt Grey
Umbilical retract	15045	Blue
Sump pump (SP-102) control box	No coating authorized	
Work cage distribution box	15045	Blue
Electro-Mechanical Actuator (EMA)	15045	Blue
Motor generator	15045	Blue
Battery support brackets	17925	White
Launcher closure ballistic actuator	15045	Blue
Air handler control panel	16376	Lt Grey
Emergency fan	15045	Blue
Safety stripes	13655	Yellow
Air handler drain line protection ramp	13655	Yellow
Launch tube heater control panel	16376	Lt Grey
Emergency fan air duct	15045	Blue
Secondary door	24585	Sea foam Green
Ladder (1st to 2nd level)	17925	White
Monorail I-beam assembly	17925	White
Shock isolators	24525	Lt Green
Shock isolated floor movement limit lines	17038	Black
Primary door (interior)	17925	White
Primary door (exterior band)	16376	Lt Grey
Personnel access shaft	17925	White
Primary door bearing surface	17925	White
Pipes and conduits	Same as associated equipment/fixtures	
Launcher distribution panel	16376	Lt Grey
Communications jack boxes	17925	White
Rattle space EMI screen	IAW TO 21M-LGM30F-101	
Rattle space floor under foam blocks	16376	Lt Grey
Floors	16376	Lt Grey
ESA room walls/floor	16376	Lt Grey
ESA room panels, door and trim	16376	Lt Grey
Air conditioner equipment (New)	16376	Lt Grey
Electro-Mechanical Actuator (EMA)	16376	Lt Grey
EMA support racks	16376	Lt Grey
Equipment rack air duct	17925	White
J-Ladder platform	No coating authorized	

LER Safety Posts	13655	Yellow
URD background	13655	Yellow
URD stencils	17038	Black
<b>Launch Tube</b>		
Launch tube steel liner	17925	White
Launch tube floor	17925	White
Pipes and conduits	17925	White
Missile suspension system travel limit markings	17038	Black
Missile suspension system and components	15045	Blue